

THE OCCURRENCE OF COCCINELLIDAE IN SUBURBAN HABITATS

By LINDA J. LOSITO*

I would like to make a number of points regarding D. F. Owen's "Fluctuations in Abundance of Coccinellidae" (*Ent. Rec.* 1982, **94**: 225-228; 1983, **95**: 29-31). Having carried out a similar study of an Oxfordshire garden since 1976, it is apparent that the Malaise trap alone does not give a complete picture of the suburban habits of ladybirds. The site, approximately 348 m², has yielded a list of twelve Coccinellidae, two of which have never appeared in Malaise trap samples (Table 1).

Certain assumptions about the relative abundance of these ladybirds on the site could be made from this list i.e. that only four species are at all common, while the rest are occasional migrants. Further observations lead me to believe otherwise.

Psyllobora 22-punctata both breeds and overwinters in the garden. Large numbers of the distinctive yellow larvae regularly appear, feeding on the mildewed leaf surfaces of *Ranunculus repens*. Their feeding habits have been well-documented by Turian (1969). In winter, the adults hide amongst any available vegetation, and almost every batch of cut spinach, cabbage or brussel sprouts will contain several specimens in the leaves.

The same crops yield overwintering adults of *Coccinella 7-punctata* and *Calvia 14-punctata*; these two species are also found amongst weeds and in grass tussocks. *C. 14-punctata* has been reared from pupae on *Miscanthus sinensis*, an ornamental grass which always supports a large population of aphids and *Adalia 2-punctata* larvae. The large grey larvae of *C. 7-punctata* still appear here every year, though never in such quantities as 1976. I do not support Dr. Owen's view that simply because the adults are now appearing in small numbers in his Leicester trap samples they have ceased to breed completely in gardens.

Mating pairs of *Adalia 10-punctata* occur every year on a particular shaded plum tree. I have watched them regularly in the hope of observing, with no success, the cross-breeding which is reputed to occur with *A. 2-punctata* (Marriner 1926). The putative hybrid *Adalia X biabilis* is often seen.

Calvia 14-guttata also seems to prefer the shady end of the garden, occurring most frequently on sloe and elderberry. It is probably for this reason that it very seldom appears in the Malaise trap, which is situated in a sunny border. This species has not yet been seen breeding, and may be coming in from Wytham Woods, where it is relatively common.

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	1976	1977	1978
<i>Coccinella 7-punctata</i> L.	529	43	10
<i>Coccinella 11-punctata</i> L.	173	5	—
<i>Adalia 2-punctata</i> (L.)	181	100	133
<i>Adalia 10-punctata</i> (L.)	—	3	7
<i>Psyllobora (Thea) 22-punctata</i> (L.)	—	—	1
<i>Calvia (Propylea) 14-punctata</i> (L.)	290	93	53
<i>Calvia 14-guttata</i> (L.)	—	—	1
<i>Tytthaspis 16-punctata</i> (L.)	1	2	—
<i>Exochomus 4-pustulatus</i> (L.)	—	1	2
<i>Chilocorus renipustulatus</i> (Scriba)	—	1	—
<i>Neomyzia oblongoguttata</i> (L.)	—	—	—
<i>Rhyzobius litura</i> (F.)	—	—	—

Table 1. Coccinellidae trapped in an Oxford garden, showing numbers taken by Malaise trap over three years.

Coccinella 11-punctata was very abundant in 1976, feeding on potato aphids, and has since declined in numbers. However, it did breed, and several pupae were reared. *Neomyzia oblongoguttata* has only been taken once in a light trap, and never observed since 1976. *Exochomus 4-pustulatus* and *Tytthaspis 16-punctata*, another mildew feeder, occur in relatively small numbers each year, but are certainly more abundant than the Malaise trap would indicate. *Rhyzobius litura* is very common amongst piles of dead vegetation, but since it does not fly, has never appeared in the trap.

Malaise trapping is not an entirely random method of insect sampling. To collect the maximum number of garden insects, the trap has to be sited in a sunny, freely accessible flower border. It will thus favour nectar and aphid-seeking insects, while the shade-loving or fungus-feeding species will be under-represented. I demonstrated this to my own satisfaction in 1976, by running a second trap in a damp shady area. Very few insects were taken, probably because a colder spot will produce less flight activity, for the same area has subsequently proved very rich for a whole range of species using different trapping methods. Furthermore, species taken here were not always represented in the main trap at all.

The Malaise trap is an important tool, but should not be used in isolation particularly when sampling beetles. Many beetle species do not fly, and of those that do, the response of many to hitting

the netting of a trap is to drop and walk away. I have obtained over two hundred species of beetle from the Oxford garden (Losito, in prep.) and only a small proportion of these were from trap samples. Other trapping methods give a much better indication of the role and feeding habits of a particular species, and show that the garden sites are much less uniform than is indicated by Malaise trapping. Incidentally, *Episyrphus balteatus*, the aphidophagous hoverfly, is not specific to cabbage aphids in my garden as it appears to be in Leicester. I have reared it from a whole range of plants since 1976, including *Miscanthus sinensis* and the cultivated rose; it is always particularly numerous on the Opium Poppy, *Papaver somniferum*.

References

- Turian, G. , 1969. Coccinelles micromycétophages. *Mitt. Schweiz. ent. Ges.*, **42**: 52-57.
Marriner, T. F., 1926. A hybrid coccinellid. *Ent. Rec.*, **38**: 81-83.

CATOCALA FRAXINI L. IN SURREY. — A male in good condition came to a lighted window of Croydon College, Croydon on 21st September 1983. It was let in somewhat fortuitously by a kind-hearted technician who considered the night air was a little cold for it. The moth was allowed to roam the laboratory until the following evening when it was promptly identified by a lecturer, Mr. Allan Pearson, who succeeded in capturing it. — D. C. LEES, 74, Woodcrest Road, Purley, Surrey CR2 4JB.

AGRILUS ANGUSTULUS ILL. & SCOLYTUS INTRICATUS RATZ. (COL.) IN S. E. LONDON. — The only records I have seen of these two beetles in the immediate environs of London, at all events on the south-east side, are those of William West round about the turn of the century: Shooters Hill and Abbey Wood for the *Agrihus*, Lewisham for the *Scolytus**. I had myself found them nowhere nearer than Darenth and Farningham Woods, some 10-12 miles to the east. It may, therefore, be worth noting the occurrence of both species during the past summer (1983) in the woods fringing Eltham Common at the foot of Shooters Hill; the Buprestid swept under oaks (a few examples), the Scolytid as usual infesting the thin bark of an oak bough lately broken from the parent tree — in some plenty with a few still in the pupal stage (1.vii). The VCH list for Kent (Fowler, 1909) notes *A. angustulus*, like the closely similar *A. laticornis* Ill., as very local, with only Darenth Wood given for these two species, but I have taken both at Blean and Ham Street and would expect one or the other to occur in almost any Kentish wood. *S. intricatus* is given as rare in the county, the sole localities listed there for it being Darenth Wood (again!) and Cobham Park. — A. A. ALLEN.

*Fowler (1891, *Col. Brit. Isl.*, **5**: 409) includes for this species two old suburban records, Forest Hill and Dulwich.